

I claim

1. A method of obtaining printed instances of a document, the method comprising
 - distributing copies of electronic document data to document processors, the electronic document data containing instructions for printing each instance
 - 5 from a respective one of the document processors;
 - including a definition of a user data input field in the electronic document data, for receiving a string of characters entered in said field;
 - including an embedded program in the electronic document data, linked to the user data input field, for generating commands to print geometrical
 - 10 elements of a bar code, that represent a series of codewords derived from the characters in the string, each codeword being represented as a respective configuration of printed geometrical elements and their background in a respective area of the bar code.
2. A method according to Claim 1, wherein the embedded program is
- 15 arranged to make at least one of the configurations dependent on a further factor other than the codeword represented by the configuration that will be decoded upon decoding the bar code.
3. A method according to Claim 1, wherein the embedded program makes the configurations dependent on the specific area in which the codeword
- 20 is represented, so that mutually different configurations will result from representing a specific codeword dependent on whether the specific codeword is represented in one region or another.
4. A method as claimed in Claim 3, wherein the embedded program is arranged to control printing of the bar code as a two dimensional bar code, at
- 25 least part of the areas having mutually different shapes, the embedded program adapting the commands to print the elements of the configuration

that is used to represent a codeword according to the shape of the area in which the codeword is represented.

5. A method as claimed in Claim 3, wherein the embedded program is arranged to include additional information in the areas, the additional
5 information being independent of the codewords represented in the areas, the additional information being included by adding geometrical elements, removing geometrical elements and/or modifying visual properties of part of the geometrical elements that represent at least one of the codewords, dependent on the area in which the codeword is represented in a way that does
10 not affect a decoded result when the bar code is decoded after scanning.

6. A method as claimed in Claim 4, wherein the embedded program is arranged to print additional geometrical elements that extend from within a region that is defined by all geometrical elements that will be used to decode the bar code in the printed document, to outside said region among further
15 printed items of the document, so that the additional geometrical elements do not affect a decoded result when the bar code is scanned and decoded.

7. A method as claimed in Claim 4, wherein the geometrical elements each have a property that does not affect the decoded data, the embedded program being arranged to set said property in different ones of the
20 geometrical elements in at least one area that represents a codeword differently during printing.

8. A method as claimed in Claim 7, wherein the embedded program is arranged to select a color and/or grey level density of different geometrical elements differently, as a predetermined function of position in an area where
25 the bar code is printed.

9. A electronic document processor, comprising a user data input device and a connection for a printer, the electronic document processor having a loaded electronic form that contains a definition of a user data entry field for receiving a string of input characters from a user, the processor being
30 arranged to extract and execute an embedded program from the document, the

embedded program being linked to the user data input field, for generating commands to print geometrical elements of a bar code that encodes a series of codewords derived from the characters in the string, each codeword represented as a configuration of printed geometrical elements and their
5 background in a respective area of the bar code.

10. An electronic document processor as claimed in Claim 9, wherein the embedded program is arranged to make at least one of the configurations dependent on a further factor other than the codeword represented by the configuration that will be decoded upon decoding the bar code.

10 11. An electronic document processor as claimed in Claim 9, wherein the embedded program makes the configurations dependent on the specific area in which the codeword is represented, so that mutually different configurations will result to represent a specific codeword dependent on whether the specific codeword is represented in one region or another.

15 12. An electronic document processor as claimed in Claim 11, wherein the embedded program is arranged to control printing of the bar code as a two dimensional bar code, at least part of the areas having mutually different shapes, the embedded program adapting the commands to print the elements of the configuration that is used to represent a codeword according to the
20 shape of the area in which the codeword is represented.

13. An electronic document processor as claimed in Claim 11, wherein the embedded program is arranged to include additional information in the areas, the additional information being independent of the codeword represented in the areas, the additional information being included by adding
25 geometrical elements, removing geometrical elements and/or modifying visual properties of part of the geometrical elements that represent at least one of the codewords, dependent on the area in which the codeword is represented in a way that does not affect a decoded result when the bar code is scanned and decoded.

14. An electronic document processor as claimed in Claim 13, wherein the embedded program is arranged to print additional geometrical elements that extend from within a region that is defined by all geometrical elements that will be used to decode the bar code in the printed document, to outside
5 said region among further printed items of the document, so that the additional geometrical elements do not affect a decoded result when the bar code is scanned and decoded.

15. An electronic document processor as claimed in Claim 13, wherein the geometrical elements each have a property that does not affect the decoded
10 data, the embedded program being arranged to set said property in different ones of the geometrical elements in at least one area that represents a codeword differently during printing.

16. An electronic document processor as claimed in Claim 15, wherein the embedded program is arranged to select a color and/or grey level density of
15 different geometrical elements differently, as a predetermined function of position in an area where the bar code is printed.

17. An electronic form that contains a definition of a user data entry field for receiving a string of input characters from a user and an embedded program linked to the user data input field, for generating commands to print
20 geometrical elements of a bar code, that represents a series of codewords derived from the characters in the string, each codeword represented as a configuration of printed geometrical elements and their background in a respective area of the bar code.

18. An electronic form according to Claim 17, wherein the embedded
25 program is arranged to make at least one of the configurations dependent on a further factor other than the codeword represented by the configuration that will be decoded upon decoding the bar code.

19. An electronic form according to Claim 17, wherein the embedded program makes the configurations dependent on the specific area in which the
30 codeword is represented, so that mutually different configurations will result

from representing a specific codeword dependent on whether the specific codeword is represented in one region or another.

20. An electronic form as claimed in Claim 19, wherein the embedded program is arranged to control printing of the bar code as a two dimensional
5 bar code, at least part of the areas having mutually different shapes, the embedded program adapting the commands to print the elements of the configuration that is used to represent a codeword according to the shape of the area in which the codeword is represented.

21. An electronic form as claimed in Claim 19, wherein the embedded
10 program is arranged to include additional information in the areas, the additional information being independent of the codewords that are represented in the areas, the additional information being included by adding geometrical elements, removing geometrical elements and/or modifying visual properties of part of the geometrical elements that represent at least one of the
15 codewords, dependent on the area in which the codeword is represented in a way that does not affect a decoded result when the bar code is scanned and decoded.

22. An electronic form as claimed in Claim 21, wherein the embedded program is arranged to print additional geometrical elements that extend from
20 within a region that is defined by all geometrical elements that will be used to decode the bar code in the printed document, to outside said region among further printed items of the document, so that the additional geometrical elements do not affect a decoded result when the bar code is scanned and decoded.

25 23. An electronic form as claimed in Claim 21, wherein the geometrical elements each have a property that does not affect the decoded data, the embedded program being arranged to set said property in different ones of the geometrical elements in at least one area that represents a codeword differently during printing.

24. An electronic form as claimed in Claim 23, wherein the embedded program is arranged to select a color and/or grey level density of different geometrical elements differently, as a predetermined function of position in an area where the bar code is printed.

5 25. A machine readable medium, comprising an electronic form according to Claim 17.

26. A method of authoring an electronic document, the method comprising

- including a definition of a field for entering a string of characters in the
- 10 document;
- providing software building blocks for building an embedded program for generating commands to print geometrical elements of a bar code, so that the generated bar code is decodable according to a predetermined standard,
- assembling the building blocks into the program during authoring of the
- 15 document, while adapting the embedded program to make a visual aspect of the bar codes generated under control of the program specific to the document and/or the field, without affecting a result of decoding the bar code.

27. A document authoring machine, for generating an electronic document that includes a field for entering a string of characters and an

20 embedded program linked to the field for generating commands to print geometrical elements of a bar code, the machine comprising software building blocks for building the embedded program so that the generated bar code is decodable according to a predetermined standard, and an editor for assembling the building blocks when the document is authored, the editor providing for

25 adaption of the embedded program to make a visual aspect of the bar codes generated under control of the program specific to the document and/or the field, without affecting a result of decoding the bar code